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ABSTRACT

A program was designed to train college students in the use of behavior modification procedures with problem children in the classroom. Through application of social learning theory principles and operant conditioning, program trainees learned to reduce the innapropriate behavior of problem children in class, to prevent small difficulties from becoming future problems, and to maintain optimal levels of academic and social behavior. The training program consisted of four phases: pre-intervention training in observation and data collection, pre-intervention training in classroom contingency management, intervention strategy training and implementation training. Problems encountered during the pre-intervention phase (such as students "freezing" when being videotaped during role-playing practices) were usually resolved while the program was being conducted on the college campus. The majority of problems took place in the public school setting and generally stemmed from a reciprocal view of incompetency existing between classroom teachers and college students. To deal with problems, a set of guidelines was developed which related to the baseline data collection phase, the intervention/teaching phase, and the relationship between participating students and the school setting. (Appended is a list of errors commonly made by poorly trained teachers attempting to carry out behavior modification programs.) (SB)

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Problems of Quality Control in the Use Of Behavior Change Techniques In Public School Settings[1]

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The current issue of the certification of behavior practioneers has generated compelling arguments on both the pro and con sides of the issue (Stuart, Cautela, and Azrin, 1975). Most of the arguments and the guidelines presented to address the problem are concerned with the certification of behavior therapists--clinicians--working with clinical populations in clinical settings (AABT, 1969; Agras, 1973, Behavior Therapy and Research: By-Laws, 1970). Yet the greatest probability of the inappropriate or inadequate use of behavior change techniques would seem to be when such techniques are being attempted by untrained or poorly trained para-professionals in non-clinical settings. Nowhere does this appear more evident than in public schools.

There are two broad dimensions of the problem of the adequate use of behavior modification procedures in public schools: 1) evidence of the inadequate use of procedures by school personnel 2) problems involved in building programs to train and evaluate college students in the use of behavior modifications procedures for public school settings.

Regarding the first problem area, the present paper provides a list (Appendix A) of some of the mistakes which commonly occur at each step of a behavior change program that is being implemented by poorly trained teachers or other school personnel. This list also includes mistakes which one can only hope are not common, but which have been observed in classrooms.

The more extensive portion of this paper is a description of a program designed to train college students to carry out behavior modification procedures in the classroom and a discussion of the problems occurring within the program and between student trainees and the harsh reality of the public school.

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Beginning as any well trained behaviorist should, I began the development of the program with a specification of behavioral objectives:

Through the systematic application of the principles of social learning theory and operant conditioning the trainees will be able to:

1. Reduce the inappropriate behavior of "problem" children in the classroom.
   a. Pinpoint a single problem behavior as a starting point of change.
   b. Describe in succinct, behavioral terms both the behavior which is to be decreased and the appropriate behavior(s) to be increased.
   c. Observe and record the frequency with which the problem behavior and the incompatible appropriate behavior occur before the institution of an intervention program.
   d. Construct an intervention program designed to reduce the problem behavior and to increase appropriate.
   e. Carry out the proposed intervention program.
   f. Observe and record the frequency of the target behaviors after the implementation of the intervention.
2. Prevent current small difficulties from becoming future problems and maintain present optimal levels of academic and social behavior.
   a. Structure the classroom environment so that it provides an optimal setting for learning.
   b. Establish (with the children) a few clear cut classroom and playground rules stated in terms of observable behaviors. Reinforce children for engaging in these behaviors.
   c. Provide immediate positive consequences for appropriate academic and social behavior.
   d. Ignore inappropriate behavior which is not of such intensity as to be injurious to the target child and/or to others or is not of such a high frequency as to preclude the target child from being able to engage in appropriate behavior.

The training program was divided into four broad phases: 1) pre-intervention training in observation and data collection; 2) pre-intervention training in classroom contingency management; 3) intervention strategy training; and, 4) implementation training.

On the first class meeting students, all of whom had indicated that they had taken a basic course in the principles of reinforcement psychology, were given a pre-test to determine whether or not they had retained the ability to write and/or to recognize [illegible] definitions and principles. Students who did not achieve at least 80% accuracy on the test were given reading assignments to correct this deficiency. During the same class period each student filled out a schedule indicating when they had at least two days during the school week with a two-hour block of time on the same days. Finally, trainees were given a pupil/teacher rating form and a description of the procedures which should be followed in using the forms. Operational definitions of the behaviors to be coded were included (Goodwin, Meyerson, 1971). They were instructed to memorize the categories of pupil/teacher behavior and the coding procedures before the next class meeting.

For the next several sessions observation practice was provided in the forms of coding from videotape the behavior of four children and a teacher in an out-of-control classroom. When the trainees had achieved an 80% reliability with the pre-coded videotape, they went into an actual classroom--two trainees and an observer trainer--and continued their observation training until they had achieved an 80% inter-rater reliability in the classroom setting.

Concurrently with the in vivo observation training in the school, students were beginning their pre-intervention training in classroom contingency management on the college campus. They were first familiarized with the "generalizable" academic behaviors with which they would work while they were in the classroom. Specific subject matter was not stressed at this point. The trainees were to work with a small group of children, which was to include a target child, in subject matter areas designated by the cooperating classroom teachers. The generalizable academic behaviors included attending,

beginning tasks on time, staying on task, completing tasks, accuracy, following directions, asking questions, and finding answers.

Next, while being video-taped, each trainee taught a 10-15 minute micro-lesson, attempting to use the contingency management skills they had read about. Correct procedures were modeled for the trainee just prior to his or her presentation and during the presentation if problems were encountered. Other students in the class role-played elementary school children. After the presentation, trainees received direct feedback of themselves from the videotape.

During the time that the modeling/role playing practices were conducted on the college campus, baseline data were being collected in the public school classrooms on a target child selected by the participating classroom teachers. Data were also collected on the teacher and peer behaviors which were contingent on appropriate/inappropriate target child behaviors. After baseline data had been collected the trainees, in conjunction with the classroom teacher, checked other possible data sources (eg. cummulative folders) and gave academic achievement tests where applicable in order to increase the rigor of their intervention proposals.

During the intervention strategy training phase of the program, trainees developed intervention proposals based on the data they had on their target children. The intervention strategies were required to be designed in such a manner that they might reasonably be expected to decrease a specified inappropriate behavior and to increase an appropriate behavior which was incompatible with the declaration target. Graduate coordinators (graduate students who had taken the course on a previous semester and done very well), the instructor, and other class members critiqued the intervention proposals and suggested ways in which they might be strengthened.

Finally, the implementation phase of the program began. It included the following components: Students were placed in pairs in an actual classroom setting. However, they worked with a small group of children rather than with the entire classroom. Here, while one member of the team observed and coded pupil/teacher (trainee) interaction, the

other member practiced the behavioral techniques they had learned; they then traded roles for the next session. The role of the instructor and of the graduate coordinators was to observe the sessions and to give corrective feedback to the trainee directly after the teaching session.

As intervention strategies began to be implemented, trainees attended class meetings on campus to discuss possible needs for strategy changes or modifications. All such changes were to be based on the data collected on the target child and the teacher trainees.

In addition to the observational data that were collected, trainees kept daily "behavioral logs" of their experience: of the problems encountered with other children in their groups, with cooperating teachers, and with other school personnel. Each pair of students wrote a concise, technical report of the change program they had implemented with the target child. This included daily "lesson plans," observational data in the form of tables and graphs and a description of the entire intervention program they had carried out.

In short, the training program seemed to contain the components necessary for the training of competent behavior change agents. At least it seemed so when I wrote it. What could go wrong?

With regard to the pre-intervention training phase a number of problems occurred. Although students were given reading assignments to correct deficiencies in their knowledge of basic principles, it soon became apparent that a) they weren't doing the reading or, b) they required more feedback on their grasp of the material they had read. We didn't attempt to systematically re-test those students who continued to use basic terminology incorrectly, we simply corrected them as we went along. The primary purpose of the program was to give them implementation skills and while knowledge of principles is positively correlated with behavior modification skills (Gardner, 1972), given a limited amount of time we chose to spend it in actual skills training.

Observation training from videotape seemed, initially, to be an important aspect of the total training procedure. It does help---if you don't try to establish a high degree of reliability with the pre-coded tape before trainees go into the naturalistic setting. We found that several problems arose if we insisted on the achievement of 80% reliability on the tapes. First, it took too much time; trainees were not getting enough time for actual classroom experience. Second, most of the errors were timing errors after the third or fourth videotape session. Most of the students had obviously memorized the behaviors that each child on the tape engaged in after about the third session. And, third, there is always a substantial amount of attenuation of observer reliability between the tape sessions and the first one or two naturalistic observation training sessions. A larger number of tape sessions doesn't prevent this. It is more productive to conduct more sessions in the classroom.

Videotaping of the role-playing/micro-teaching sessions was disasterous. There were, of course, all of the problems attendent on getting the equipment and someone to run it all together in the right room at the right time. But more importantly, more than half of the students were so camera-shy that they just froze up; they clearly received little information from the play back. I suppose that they may eventually have habituated to the presence of the cameras. We didn't have that much time. A better feedback system was just to observe each student as they did their practice sessions, to stop them when they made errors to have them go over that sequence again, and to reinforce them for improvement.

We were able to resolve most of the problems that occurred while the program was being conducted on the college campus. But, as is usually the case, the majority of the more difficult problems began when the trainees began to work in the public school setting. There always seems to be a "cultural clash" when college students who have not worked in a public school setting encounter public school personnel and rules for the first time. This is intensified when the college students are attempting to do behavior modification procedures in the school.

There appears to be a reciprocal view of incompetency existing between classroom teachers and college students. Teachers don't believe that students can manage teaching activities well because they haven't had enough education courses. Students don't believe that teachers can adequately deal with children because they haven't had enough psychology courses in general, and enough training in behavior modification in particular. There is considerable error and some legitimacy on both sides.

The following specific problems stem, in large measure, from this general problem. Our students initially checked their observer reliabilities and received feedback on their performance during intervention in the faculty room. Statements related to the performance of the classroom teachers were inevitable, although no teacher was mentioned by name to my knowledge. Teachers resented hearing college students discuss the mistakes other teachers were making in contingency management (or lacks there-of) and soon made their resentment known to the principle. We stopped having reliability checks and feedback sessions in the faculty room.

Some students began giving the teachers advice about classroom management. In some cases the advice was gratutious and the teachers were offended. In other cases the teachers asked for advice and, whether they were right or wrong in their answers, the students were in no position to be providing "consultancy services."

As the preceding problems were followed by others, it became clear that a common set of guidelines and information items for teachers and college students was necessary. We were fortunate in having a counselor in the school in which we were working who was willing to serve and was competent in a liason capacity. He knew what was confusing and irritating the teachers; I knew what the students needed to be able to do in order to develop effective behavior change skills. We sat down together and between us constructed the guidelines. These guidelines first provided an overview of the purposes of the program. Specifications of the times that students would be engaged in each phase of the program were provided. Behavioral inputs which were expected from both the participating teachers and the students were specified. For example, under "observation training phase," the guidelines stated:

"Three observers will go into each participating classroom; two student trainees and one coordinator. They will observe for about 15 minutes. They will leave the classroom and check their data for reliability. They will return after this check for a second 15 minutes of observation."

The remainder of the set of guidelines related to the baseline data collection phase, the intervention/teaching phase and the relationship of participating students to the school setting and were as follows:

I. Baseline data collection phase

a. Selection of "target child" by the cooperating classroom teacher.

1. Each participating teacher may select one "problem child."

a. The problem should be one that manifests itself in the classroom. (For example, disrupting the classroom, inattention, not completing work, etc.--rather than a problem which occurs primarily on the playground.)

2. If each participating teacher will supply the following information, it will be greatly appreciated:

a. A concise behavioral description of the presenting problem. (eg. Tom walks around the room without permission, engages in verbal and/or physical aggression against his peers, blurts out without raising his hand and has not finished one assignment in math this semester.)

b. Current academic "functioning level" (as determined by test scores, etc.) of the children with whom the trainees will be working. (We will only need such estimates for the content areas that the trainees will be teaching.)

(Note: Participating teachers will not be expected to prepare the lesson plans for the student trainees use. If the classroom teacher has specific content areas to be covered and if they will tell their trainees, the trainees will see that materials are prepared for "their" children for each day they are in the classroom.)

IV. Intervention/Teaching Phase

A. After baseline data are collected on the target child, the trainees, working with their graduate coordinators and with their instructor will describe in succinct, behavioral terms both the behavior which is to be decreased, and the appropriate behavior which is to be increased. After which they will:

1. Build an intervention proposal designed to reduce the problem behavior and to increase appropriate behavior.

2. After coordinators and trainee consultation with the participating teachers and the counselor, the trainees will begin to carry out proposed intervention program in the classroom.

   a. In order to optimize the probable effectiveness of the intervention program with the target child, a list of possible reinforcers, material or activity, would be helpful.

   b. Some intervention strategies might require kitchen timers which have a buzzer to signal the end of time intervals. If the classroom teacher feels that such a signal would disrupt the rest of the students in her classroom, she should feel free to indicate this prior to the implementation of the intervention program.

B. In addition to implementation of an intervention program with a target child, trainees will be "teaching" - selected group of children.

   1. It would be helpful if participating teachers would provide the trainees (either directly or through the coordinators) with a list of the rules which are in force in their classrooms.

   2. While trainees will teach in the content area(s) deemed desirable by the participating teachers, they will be concentrating on the following "generalizable" academic skills:

      a. Attending
      b. Beginning tasks on time
      c. Staying on task
      d. Completing tasks
      e. Accuracy
      f. Following directions
      g. Asking questions
      h. Finding answers

III. Relationship of Participating Students to the School Setting

A. For the observation participation program to be successful, the student trainee must give special attention to the following:

   1. Students are reminded that the participating teachers have voluntered their time, their classroom, and their children for this cooperative program. The student trainee has been invited to work at this school in a learner capacity, not as a consultant.

   2. Students are expected to strictly adhere to the schedule and to notify the school if they are unable to attend at the appointed time.

   3. Students are invited to make use of the faculty lounge, however:

      a. Because of the many parent-aides working in the school, students will not discuss children or teachers in the faculty lounge.

      b. Coffee is not provided by the school but by the teachers themselves, therefore if you wish to have coffee at the school please bring a pound of coffee and a coffee cup.

In conclusion, this paper has attempted to show that we may certify people as Cautela (1975)suggests or we may certify programs as Risley (1975) suggests. But we will continue to encounter problems of a magnitude sufficient to nullify both programs and trainees until we, as professional behaviorists, recognize that no program however well constructed and no behavior analyst, however well trained is going to operate effectively unless we are able to provide a climate of mutual cooperation between the people in our programs and the people in the institutions in which we are working.

APPENDIX A

Errors observed on the part of classroom teachers attempting to carry out what they believed to be "behavior modification programs[11] in classrooms.

1. Failure to specify target behavior in terms of specific, observable behavior.

2. Selection of inappropriate targets, eg., "deadman targets"; having children sitting quietly doing nothing.

3. Attempting to work with too many behaviors at once.

4. Selecting target children who don't manifest the "problem" behavior for which they were referred any more frequently than do the other children in the room.

5. Inadequacies in the selection of reinforcers:
   a. failure to provide a variety of reinforcers
   b. using only primary reinforcers
   c. selecting activities or items which are not reinforcing for the children.

6. Inadequacies in the delivery of reinforcers:
   a. inconsistency in allowing the children to engage in reinforcing activities when they have completed the specified amount of work for earning the reinforcer
   b. allowing long delays between the termination of the work required and delivery of reinforcers
   c. non-contingent reinforcement

7. Problems in the use of token systems:
   a. implementing a token system with children who don't need a token system
   b. failure to keep track of the number of points children are earning
   c. failure to adjust the point value of items of activities used for back-up reinforcers so that children don't earn them too rapidly or not at all
   d. failure to pair social reinforcement with tokens
   e. failure to fade out token systems
   f. failure to individualize programs so that the children who require the most help get it

8. Teachers do not want to collect either baseline or intervention data.

9. Failure to use or inconsistent use of extinction procedures for inappropriate behaviors.

10. Using punishment or extinction procedures alone; no differential reinforcement.

11. Using punishment procedures such as time-out or response cost for behaviors that should be placed on extinction.

12. Failure to change schedules of reinforcement after behavior has been established

13. Having so many children on a time-out procedure that the children have to line up to wait their turn to go into time-out. (This is, hopefully, not a common problem).

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